

## ABSTRACT

The present invention relates to methods for performing surveys of the genetic diversity of a population. The invention also relates to methods for performing genetic analyses of a population. The invention further relates to methods for the creation of databases comprising the survey information and the databases created by these methods. The invention also relates to methods for analyzing the information to correlate the presence of nucleic acid markers with desired parameters in a sample. These methods have application in the fields of geochemical exploration, agriculture, bioremediation, environmental analysis, clinical microbiology, forensic science and medicine.